epiTRENDS

A Bimonthly Bulletin on Epidemiology & Public Health Practice in Washington State

Vol. 8 No. 4

My Oh My! Emerging Diseases of SARS, Monkeypox, and West Nile Virus Load the Bases in 2003

During the first six months of 2003, headline stories highlighted monkeypox and severe acute respiratory syndrome (SARS) outbreaks along with warnings about West Nile virus. The presence of these emerging diseases in the United States is a reminder that global travel and trade pose a risk of introducing and disseminating pathogens into previously unaffected geographic areas.

Monkeypox

Monkeypox is a rare viral disease first recognized in the 1970s in central Africa. It is an Old World orthopoxvirus, closely related to variola (smallpox virus) and vaccinia (smallpox vaccine virus). Although the monkeypox virus was first identified in ill monkeys, African squirrels or rodents are presumed to be the natural reservoir. Symptoms of monkeypox include fever, headache, sweats, chills, sore throat, and sometimes swollen lymph nodes followed by a vesicular rash resembling smallpox. Monkeypox has no specific treatment, but persons who have received smallpox vaccination before or immediately after an exposure to monkeypox may be protected. Although human mortality during outbreaks of monkeypox in Africa can reach 10%, in the current U.S. outbreak the disease has not been life threatening.

Several cases of monkeypox infection in humans identified in June in the United States were associated with contact with sick pet prairie dogs. Most cases have been mild, but one child developed encephalitis. The initial source of the virus is under investigation and may be related to exposure of prairie dogs to infected rodents imported from Africa. Pet owners, veterinarians and their staff, and animal dealers have had the highest incidence of disease. All persons infected to date have had direct contact with infected prairie dogs. Human-to-human transmission has occurred in African outbreaks, so active surveillance continues for animal and human cases linked to this outbreak

This is not the first time that prairie dogs have posed a public health risk. Last year a group of prairie dogs exposed to tularemia was distributed nationally (including to Washington State) and internationally in the pet trade. Tularemia is a bacterial zoonosis also known as “rabbit fever.” A continuing public health concern is the susceptibility of prairie dogs to bubonic plague given that those sold as pets are collected from burrows in plague-endemic areas of the United States.

The true spectrum of exotic pathogens that could be disseminated by the exotic wild animal pet trade is unknown. Virtually any exotic mammal, reptile, avian, or amphibian can be purchased over the Internet. Animals are imported, mixed, sold, traded, bred, auctioned, distributed, and redistributed without records. More than 75% of the most recently identified emerging infectious diseases are zoonotic — hantavirus pulmonary syndrome is one example — and many of the more established and severe human pathogens, such as AIDS, influenza, rabies, tuberculosis, malaria, and potentially SARS, are associated with animal and insect reservoirs and vectors.

SARS Update

As noted in the May issue of *epiTrends*, a new coronavirus is the presumed etiologic agent in severe acute respiratory syndrome. Coronaviruses have caused major illnesses among domestic animals, and may have

Continued page 4

In This Issue:

Healthy Youth Survey Page 2

Rabid Bats Page 2

Monthly Surveillance Data Page 3

WWW Access Tips Page 4

Calendar Page 4

7.03

Latest Health Survey of Teens Brings Mixed News

First, the good news: More high school students are using seat belts. The bad news: Too many youth are riding in cars driven by someone who has consumed alcohol. And the expected news: Those youth who watch the most TV also tend to be overweight. These are among the findings of the most recent health survey of adolescents in 171 schools statewide in Washington.

In fall 2002, 24,685 students in grades 6, 8, 10, and 12 answered written questions about safety and violence, physical activity and diet, alcohol, tobacco and other drug use, and related risk and protective factors. Participation in the survey was voluntary for schools, parents (who were notified of the survey), and students. Students who chose to participate could skip any question they preferred not to answer, and all responses were anonymous. The survey was available in four languages in addition to English and was administered by teachers during one class period. The responses represent the most comprehensive look at teen health attitudes and behaviors gathered to date by state officials.

Key Survey Trends

• Seat belt use among 10th and 12th graders increased steadily from about 75% in 1995 to 80% in 1999 and 90% in 2002. These figures include youth who reported wearing seat belts most or all of the time.

• About 15–20% of youth in grades 10 and 12 reported that they seriously considered suicide in the past year. This behavior has remained relatively constant since 1995.

• About 25% of 10th and 12th graders reported that during the past 30 days they rode in a car driven by someone who had been drinking alcohol. This finding is consistent with surveys conducted in the 1990s.

Findings in 2002:

• About 36% of 8th graders reported watching three or more hours of TV on an average school day; these students were especially likely to be overweight.

• About 75% of 8th graders met guidelines for vigorous activity, and these youth were less likely to be overweight.

• Use of alcohol, tobacco, and marijuana tended to increase about 50% between 8th and 10th grade (Table 1).

The Healthy Youth Survey will next be administered in fall 2004. The survey is a collaborative effort of the Office of the Superintendent of Public Instruction, the Department of Health, the Department of Social and Health Service's Division of Alcohol and Substance Abuse, and the Office of Community Development. The Washington State Institutional Review Board approved the survey methods. County prevention coordinators, community mobilization coalitions, community public health and safety networks, and others use this information to guide policy and programs that serve youth. ■

TABLE 1: Reports of substance use among adolescents in Washington, Healthy Youth Survey, 2002

Percentage Reporting	8th Graders % (C.I.)	10th Graders % (C.I.)
Smoking in past 30 days	9 (±1)	15 (±1)
Alcohol use in past 30 days	18 (±2)	29 (±2)
Marijuana use in past 30 days	10 (±1)	18 (±2)

Sentinel Physicians Needed for Flu Season

DOH, in conjunction with the Centers for Disease Control and Prevention, needs sentinel physicians for influenza surveillance during the 2003–2004 season. Please contact Phyllis Shoemaker at 206-361-2830 by August 31.

For More Information

More information about the Healthy Youth Survey, including data from the state sample, can be found at http://www3.doh.wa.gov/HYS.

Bats Pose Rabies Danger To People and Other Animals

Bats have an important role in ecosystems, especially by eating insects that are pests. However, a very small percentage may develop rabies and spread it by biting people or animals. Infected bats may behave abnormally and might be found on or near the ground.

So far in 2003, six rabid bats have been identified in Washington State, an increase compared with last year. Five children, one adult, and at least two pet cats were exposed to these rabid bats.

Rabies is a universally fatal disease, but can be prevented after exposure by prompt treatment with rabies vaccine and rabies immune globin. The best prevention is to avoid exposure to any animal that might have rabies. Never approach, handle, or feed wildlife, including bats. Caution children about this. Make sure pets are up to date on their rabies vaccination. Anyone who finds a bat in the house or who has concerns about exposure to wildlife should call the local health jurisdiction.

Monthly Surveillance Data by County

June 2003* – Washington State Department of Health

County	E. coli O157:H7	Salmonella	Shigella	Hepatitis A	Hepatitis B	Non-A, Non-B Hepatitis	Meningococcal Disease	Pertussis	Tuberculosis	Chlamydia	Gonorrhea	AIDS	Pesticides†	Lead§#
Adams	0	0	0	0	0	0	0	0	0	2	1	0	0	3/75
Asotin	0	0	0	0	0	0	0	0	0	5	0	0	0	0/0
Benton	2	0	0	0	0	0	0	0	0	35	1	0	1	0/34
Chelan	0	1	0	0	0	0	0	0	0	9	0	0	3	0/14
Clallam	0	0	0	0	0	0	0	1	0	5	0	0	0	0/#
Clark	0	7	0	0	0	0	1	2	0	77	15	0	2	0/19
Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Cowlitz	0	1	0	0	0	0	0	0	0	16	2	1	0	2/43
Douglas	0	0	0	0	0	0	0	0	0	7	0	0	1	0/0
Ferry	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Franklin	0	0	0	0	0	0	0	0	1	16	0	1	3	2/21
Garfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Grant	0	1	0	0	0	0	0	0	0	9	1	0	3	8/153
Grays Harbor	0	0	0	0	0	0	0	0	0	10	0	0	0	1/#
Island	0	0	0	0	0	0	0	0	0	34	3	1	1	0/#
Jefferson	0	0	0	0	0	0	0	0	0	10	0	0	0	0/#
King	0	20	3	2	3	0	0	30	15	459	110	17	9	0/99
Kitsap	0	0	0	0	0	0	0	0	0	64	12	0	2	0/6
Kittitas	0	0	0	0	0	0	0	0	0	5	0	0	0	0/0
Klickitat	0	0	0	0	0	0	0	0	1	3	0	0	0	0/#
Lewis	0	0	0	0	0	0	0	0	0	6	0	0	0	0/#
Lincoln	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Mason	0	3	0	0	0	0	0	1	0	7	2	0	1	0/0
Okanogan	0	0	0	0	0	0	0	0	0	8	0	0	2	0/35
Pacific	0	0	0	0	0	0	0	0	0	3	0	0	1	0/0
Pend Oreille	0	0	0	0	0	0	0	0	0	1	0	0	0	1/21
Pierce	0	7	1	0	0	0	0	23	2	229	38	3	3	0/0
San Juan	0	0	0	0	0	0	0	0	0	0	0	0	0	0/#
Skagit	0	3	0	0	0	0	0	3	0	21	4	0	1	0/27
Skamania	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Snohomish	0	4	1	0	0	1	0	13	2	125	8	3	1	0/$
Spokane	0	3	1	1	1	0	0	0	2	50	7	1	3	0/27
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Thurston	2	0	0	1	0	0	0	1	0	53	3	0	1	0/#
Wahkiakum	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Walla Walla	0	1	0	0	0	0	0	0	0	12	0	0	0	2/66
Whatcom	0	0	0	1	1	0	0	1	0	38	3	1	0	0/10
Whitman	0	0	0	0	0	0	0	0	0	17	2	0	0	0/6
Yakima	1	1	0	0	0	0	0	0	0	68	7	0	10	3/128
Unknown														0/0
Current Month	5	52	6	5	5	1	1	75	24	1407	219	28	48	27/801
April 2002	6	60	13	19	6	3	4	108	19	1297	230	31	37	23/1531
2003 to date	26	267	87	34	35	11	17	264	116	7965	1432	202	145	104/3762
2002 to date	17	207	54	87	33	13	38	243	92	7360	1459	257	113	74/3955

* Data are provisional based on reports received as of June 30, unless otherwise noted.
† Unconfirmed reports of illness associated with pesticide exposure.
§# Number of elevated tests (data include unconfirmed reports) / total tests performed (not number of children tested); number of tests per county indicates county of health care provider, not county of residence for children tested; # means fewer than 5 tests performed, number omitted for confidentiality reasons.

Emerging Diseases *(from page 1)*

spread from marketplace animals to people in southern China, where the disease is believed to have emerged in late 2002.

The World Health Organization predicted containment of the SARS outbreak in early July. The epidemic prompted a global surveillance effort that documented more than 8,000 cases and more than 800 deaths.

The symptoms of SARS are nonspecific beginning with the acute onset of fever, typically accompanied by headache and body aches, and progressing after several days to include cough and other respiratory symptoms. Some patients develop atypical pneumonia and require hospitalization with mechanical ventilation. Although the number of newly reported cases has declined, among many unknowns are whether SARS will reemerge or recur seasonally. Global surveillance continues, especially in regions of Asia where SARS was first identified.

West Nile Virus

West Nile virus (WNV) is a mosquito-borne viral infection that can affect the central nervous system of many animals, including birds, horses, and humans. Although most people are asymptomatic or have only a mild self-limiting illness, a small proportion of human WNV infections result in severe illness with paralysis or encephalitis (inflammation of the brain). There is no specific treatment or vaccine for humans.

Since West Nile virus was introduced into the United States in 1999, it has spread rapidly to affect most of North America, including Washington State, where infected birds and horses were first reported in 2002. The WNV epidemic and epizootic (epidemic among animals) in 2002 was the largest arboviral outbreak ever recorded in North America and the largest West Nile virus outbreak documented worldwide. As of June 26, 2003, only one human case has been identified in the United States; however, public health experts expect that an epidemic and epizootic will recur this year. Surveillance for bird, horse, and human cases is ongoing in Washington State.

The past few months have reinforced the importance of zoonoses and the challenge to public health. The human, animal, and environmental factors of disease surveillance, investigation, and control need to be addressed holistically through a multidisciplinary approach.

For web sites with more information on these diseases, see WWW Access Tips.

WWW Access Tips

Emerging Diseases
Visit these web sites for more information on:

Monkeypox infection control in humans: www.cdc/gov/ncidod/monkeypox/infectioncontrol.htm

Monkeypox infections in animals: www.cdc.gov.ncidod/monkeypox/animalguidance.htm

WNV: www.doh.wa.gov/ehp/ts/Zoo/WNV/WNV.html

SARS: www.doh.wa.gov/sars/

Calendar

October 13–15
Yakima

10th Annual Joint Conference on Health *— Reaching Across Boundaries: Expanding Partnerships for a Safer and Healthier Washington.* Sponsored by the Washington State Public Health Association in cooperation with the Washington State Department of Health and the Yakima Health District. For more information: http://www.wspha.org/JCH1.html

***epi*TRENDS online**

http://www.doh.wa.gov/Publicat/EpiTrends/03_EpiTrends/2003_trend.htm

*epi*TRENDS
is published monthly by the Washington State Department of Health.

Washington State Department of Health
*epi*TRENDS
P.O. Box 47812
Olympia, WA 98504-7812

BULK RATE
U.S. Postage
PAID
Washington State
Dept. of Printing